PIP-BMW 2009
Specification & Installation
(HSD Type)

-. MODEL: PIP-BM09-N3-V3.0
-. P/N : PIP-BM-0902-000

Car Solutions

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Car Solutions

-PIP BMW 09 Feature

-Clear quality view

-NTSC, PAL Auto detection

-AV source switching thru genuine button in vehicle.

-Convenient use by remote & keypad

-SAFETY function

*Safety function (Safe mode)
When this function is operated, the screen does not display any AV source's image.
User can control this function by UP button of Remote or OSD keypad

Car Solutions

-Precaution

-Ignition key should be taken off before starting installation, interface power connection must be the last step in installation.

-Power cable should be separated when connecting interface.

-Should be no any electronic devices or magnetic pole around installation place.

-All steps of installation should be done by well-trained specialist.

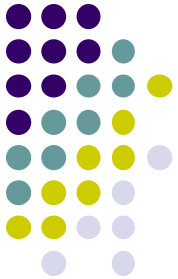
-Dismantling without manufacturer's permission can not be guaranteed, (No permission to break attached label on the board.)

-Kindly check all parts are in the box, when receiving the product, if anything missing, inform to the supplier or manufacturer.

-According to our sales policy, any problems caused by user's mistake, careless can not be guaranteed.

Car Solutions

-Main Spec.



1. Input Spec. (MULTI VIDEO INTERFACE)
   -. 3 x A/V Input (External video source).
   -. 1 x CVBS(REAR CAMERA) Input. (Rear camera source)
   -. 1 x Analog RGB Input (Navigation System output)
   -. 1 x LCD Input (Car system Input)

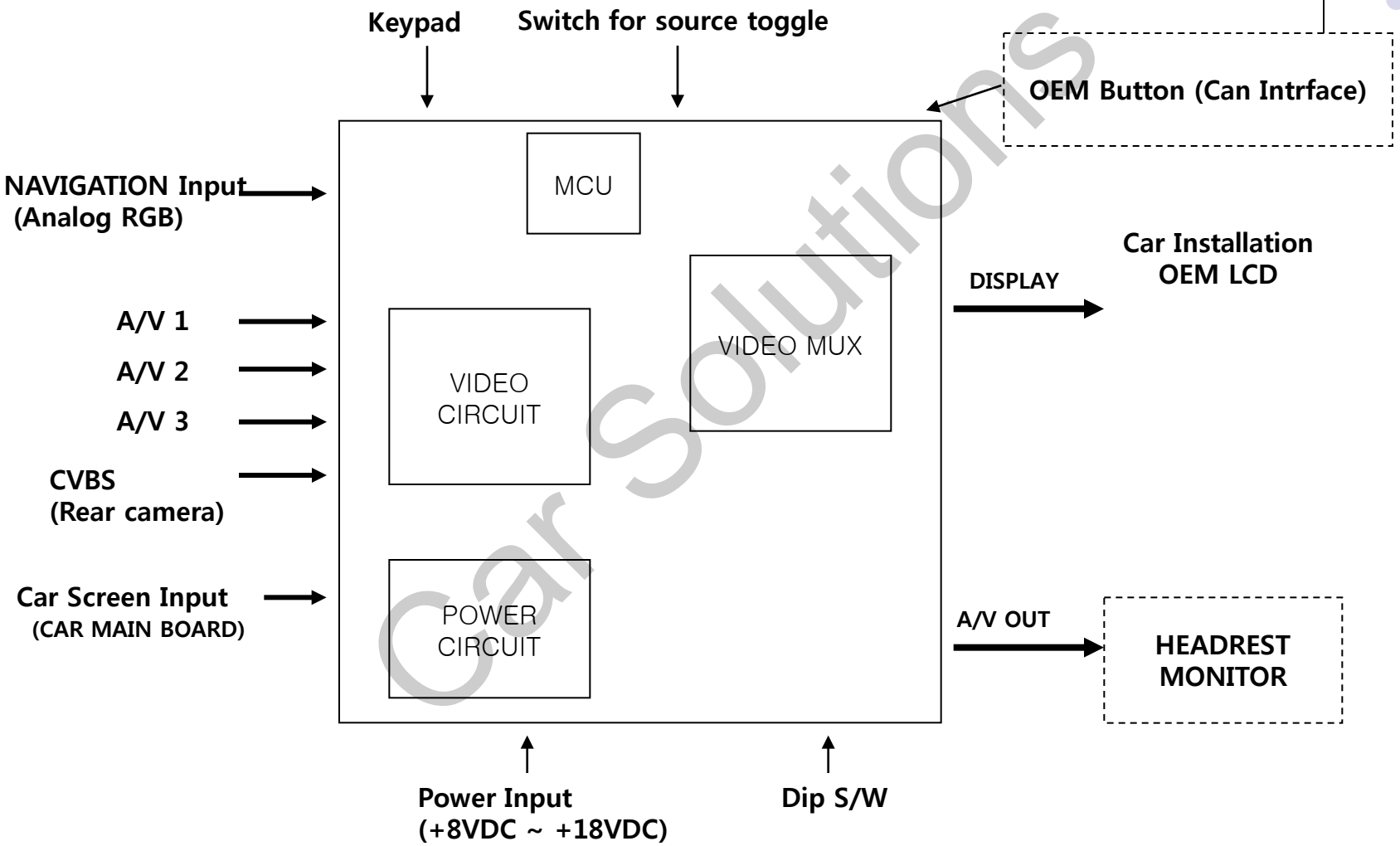
2. Output Spec.
   -. 1 x LCD Output

3. Power Spec.
   - Input Power : 8VDC ~ 24VDC
   - Consumption Power : 12WATT, Max

4. Switch Input mode
   - Input Video MUTE Function : Possible to make each input mute by operating Dip S/W.
   - Possible to switch Input mode with Keypad(or Remote control)
   - Possible to switch AV3(Front camera) with switch for source toggle
   - Detecting rear camera by CAN or rear-lamp wire

Car Solutions

-System Composition Diagram



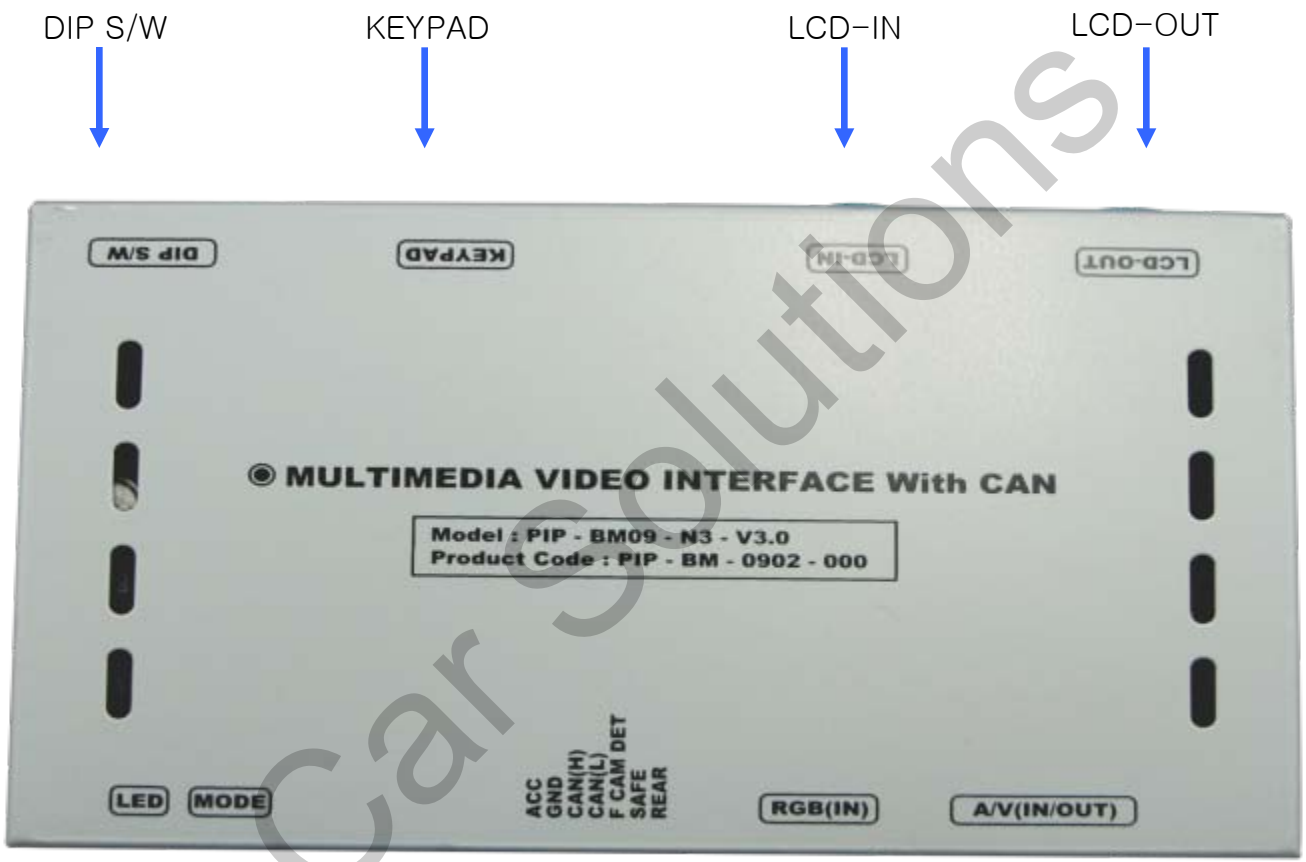
Car Solutions

-Dimension

155mm * 93mm * 22mm

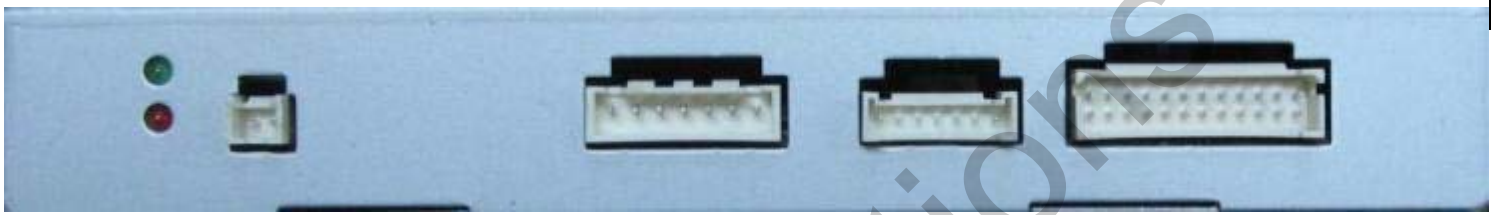
Car Solutions

-External Appearance



Car Solutions

-External Appearance



MODE

POWER/CAN

RGB(IN)

A/V(IN/OUT)

LCD-OUT

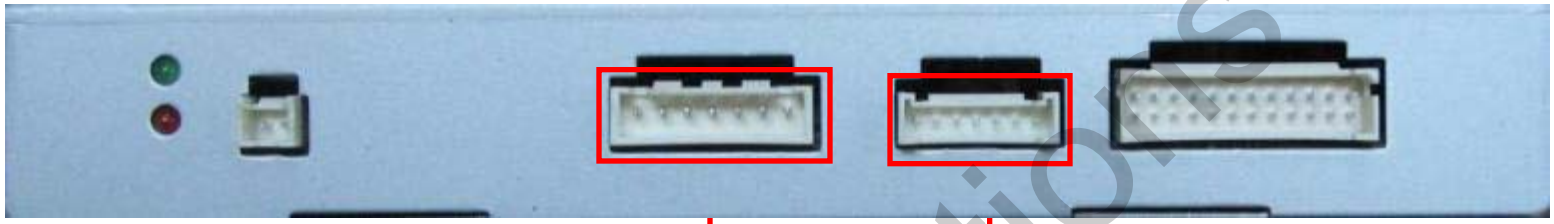
LCD-IN

KEYPAD

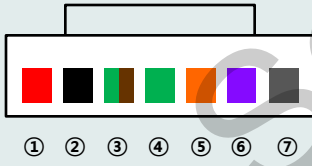
DIP S/W

Car Solutions

-Connector Pin Assignment

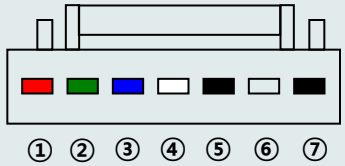


***Power Connect**



① ACC (RED)
② GND (BLACK)
③ CAN(H) (GREEN+ BROWN)
④ CAN(L) (GREEN)
⑤ F-CAM-DET(N.C)
⑥ SAFE(VIOLET)
⑦ REAR-C (GREY)

***RGB-IN Connect**

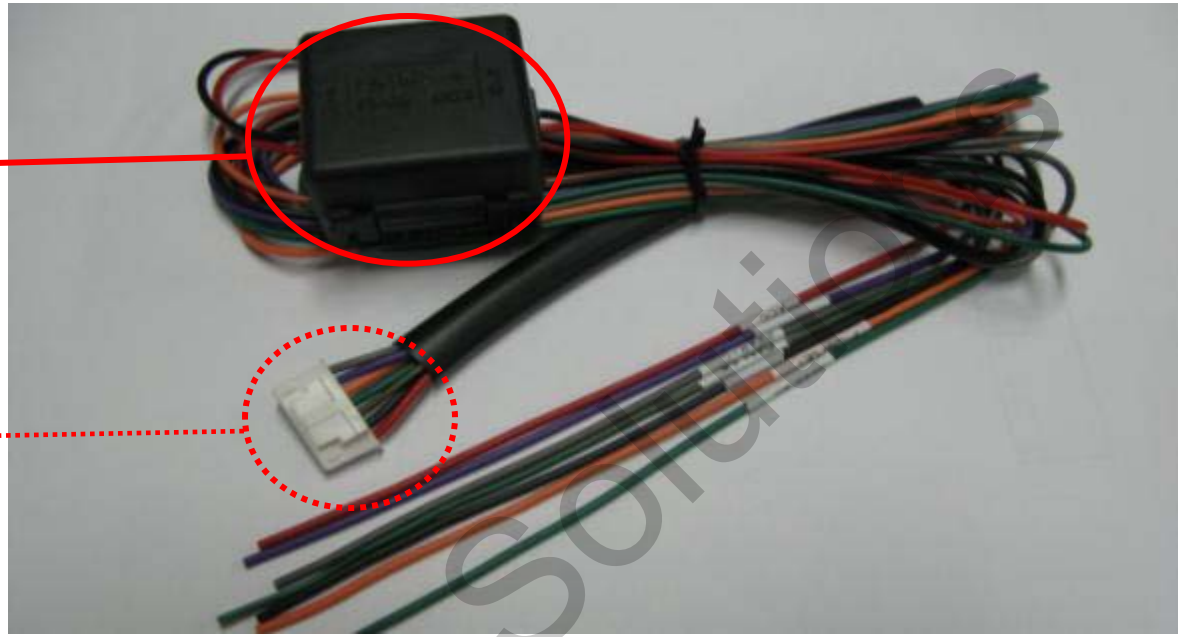


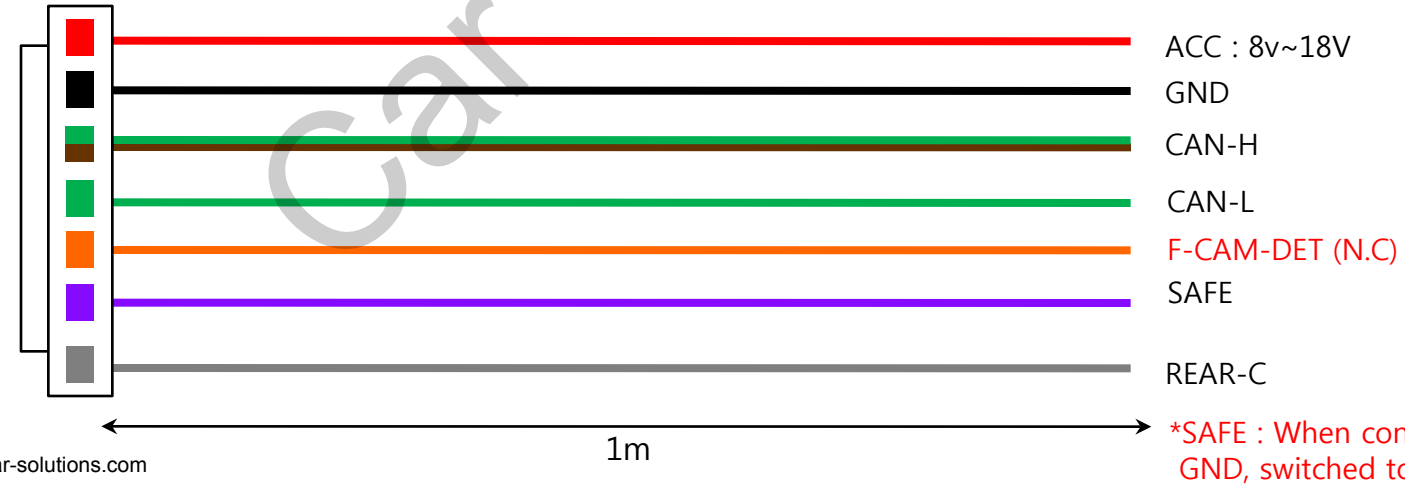
① R DATA (RED)
② G DATA (GREEN)
③ B DATA (BLUE)
④ SYNC (WHITE)
⑤ GND (BLACK)
⑥ N.C (OPTION)
⑦ N.C (OPTION)

Car Solutions

-Connector Pin Assignment

*** Power Cable**





*SAFE : When connecting to GND, switched to MAIN image and initialized.

Car Solutions

-DIP SW Setting

※ ON : DOWN, OFF : UP ; Default : all OFF

#PIN	FUNCTION	DIP S/W Selection
1	RGB INPUT MUTE	ON : Skipping RGB Mode OFF : RGB Display
2	A/V 1 MUTE	ON : Skipping A/V 1 OFF : A/V1 Display
3	A/V 2 MUTE	ON : Skipping A/V 2 OFF : A/V2 Display
4	A/V 3 MUTE	ON : Skipping A/V 3 OFF : A/V3 Display
5	Monitor Size (E90, F01, F10)	ON : 7" OFF : 8.8", 10.2"
6	N.C	
7	When to choose rear mode (ON : CVBS4, OFF : MAIN)	
8	N.C	

※DIP S/W Use Example

-. Use Input Mode : A/V2, A/V3
-. Use original Navigation
-. Use rear camera

- ▷ **DIP S/W : 1,2 -→ ON (INPUT MODE SKIP)**
- ▷ **DIP S/W : 3 -→ OFF (enable A/V3)**
- ▷ **DIP S/W : 4 -→ OFF (enable A/V3)**
- ▷ **DIP S/W : 5,6 -→ OFF**
- ▷ **DIP S/W : 7 -→ ON**
- ▷ **DIP S/W : 8 -→ OFF**

Car Solutions

-How to use remote

Dimension : 92 * 40 * 10 (mm) **– Remote or Keypad (Optional)**

POWER&PIP : N.C

MENU : OSD MENU

OK : Selection

▲ : Up , pressing for 5sec : SAFE MODE Operation.

▼ : Down

◀ : Left

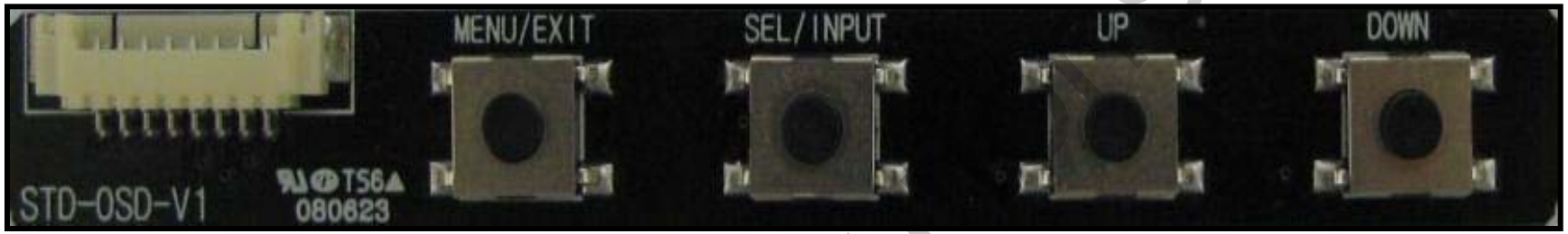
▶ : Right

*FACTORY MODE (Interface setting for installer)
: Operated by pressing ▲ → ▼ → ▲ →MENU of remote or keypad in order.

Car Solutions

-How to use Keypad

※ Remote or Keypad (Optional)



MENU : OSD Menu, switching to previous mode.

SEL : Selection in menu, switching AV sources.

UP : Move to Left, Up

DOWN : Move to Right, Down

UP + DOWN at once : Operating "SAFE MODE"

*FACTORY MODE (Interface setting for installer)
: Operated by pressing ▲ → ▼ → ▲ →MENU of remote or keypad in order.

Car Solutions

-OEM Buttons

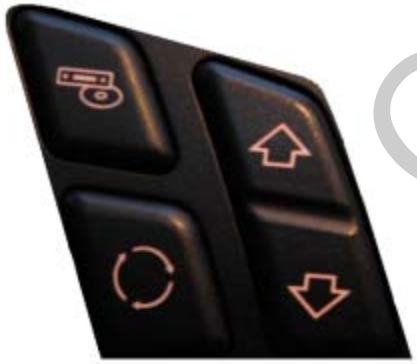
- I-Drive Button (E90, F01, F10)

MENU Button : Long press – Mode Switching
Short press – Switching to OEM
▽ Button : Long Press – Dual Screen operation

※ In **DMB Mode (Only available for Korea Spec.)**
△ Button : Short press – Channel up
Long press – Channel scan
▽ Button : Short Press – Channel Down
Long press – Dual Screen operation

※ In reverse gear position (Only available in using aftermarket rear cam)
▽ Button : Long Press – Dual Screen operation (PDC image : Rear cam)
Short – PDC image transparency adjustment

- Steering Wheel Buttons (E90)



button : Long press – Dual screen operation

button : Long press - Mode Switching

Car Solutions

-OSD(On Screen Display)

· Analog RGB Mode

· Video Mode

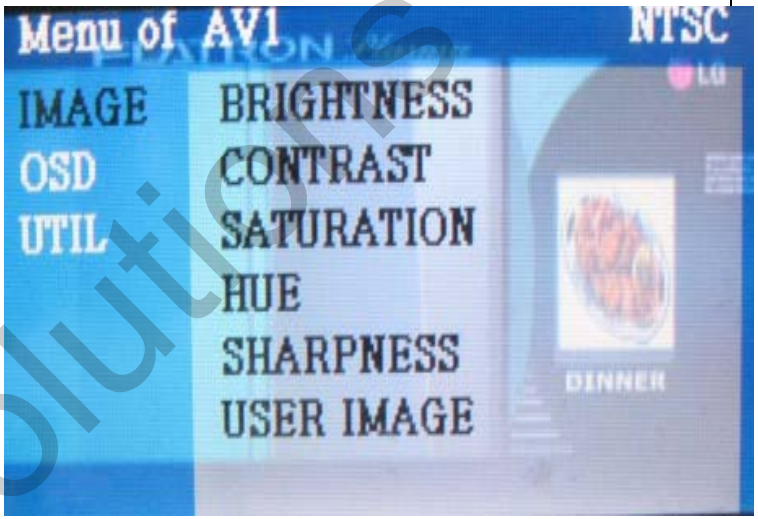


IMAGE Menu

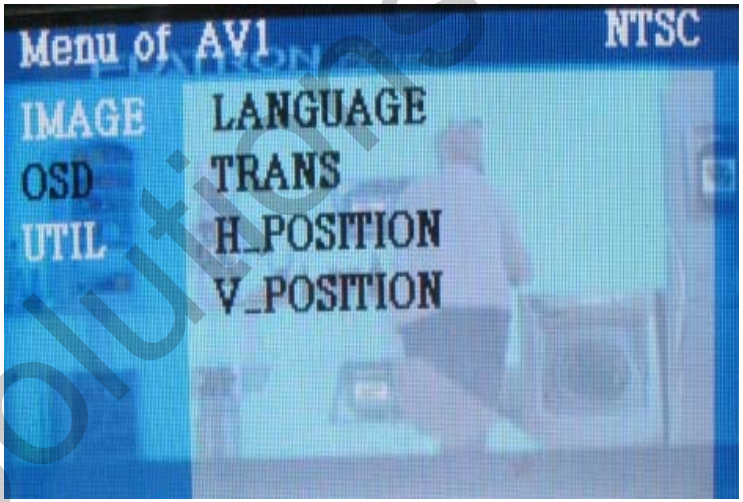
- **BRIGHTNESS**
- **CONTRAST**
- **SATURATION**
- **HUE**
- **SHARPNESS**
- **USER IMAGE**

Car Solutions

OSD(On Screen Display)

· Analog RGB Mode

· Video Mode



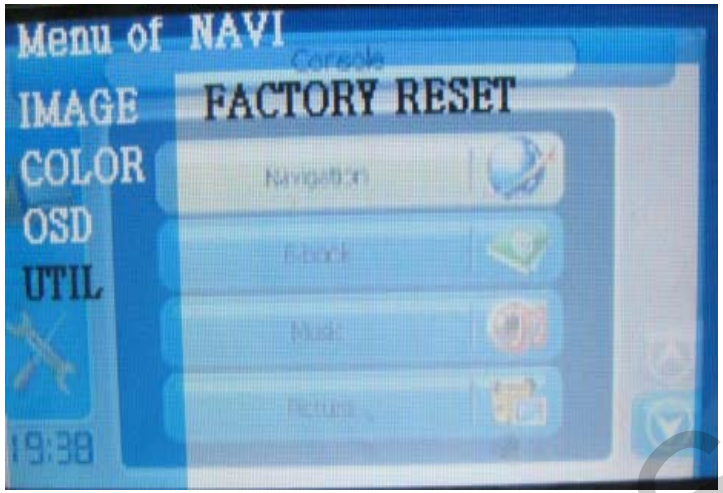
OSD Menu

- **LANGUAGE** : ENGLISH, CHINESE
- **TRANS**
- **H_POSITION**
- **V_POSITION**

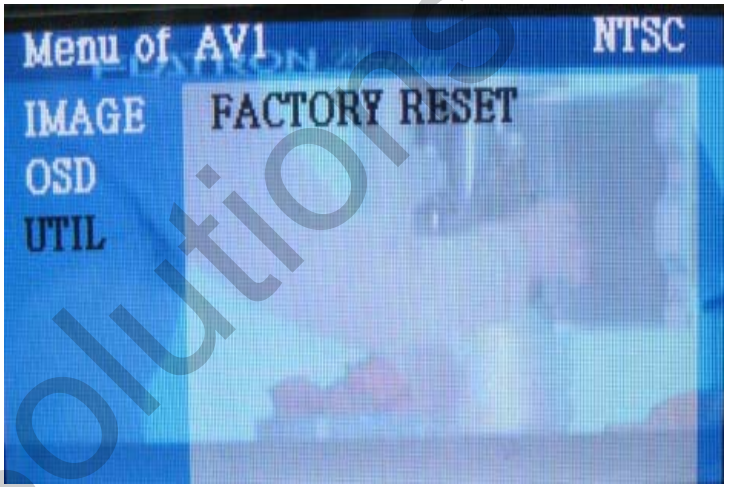
Car Solutions

OSD(On Screen Display)

· Analog RGB Mode



· Video Mode



UTIL Menu

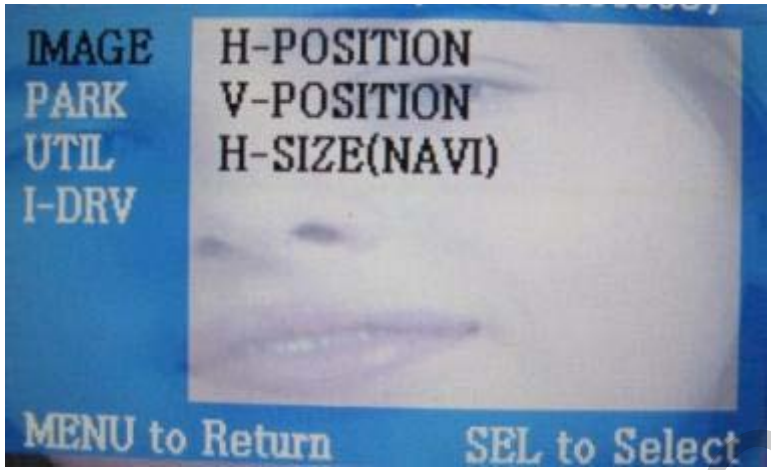
- **FACTORY RESET** : Initializing setting value (NAVI, AV individual initialization)

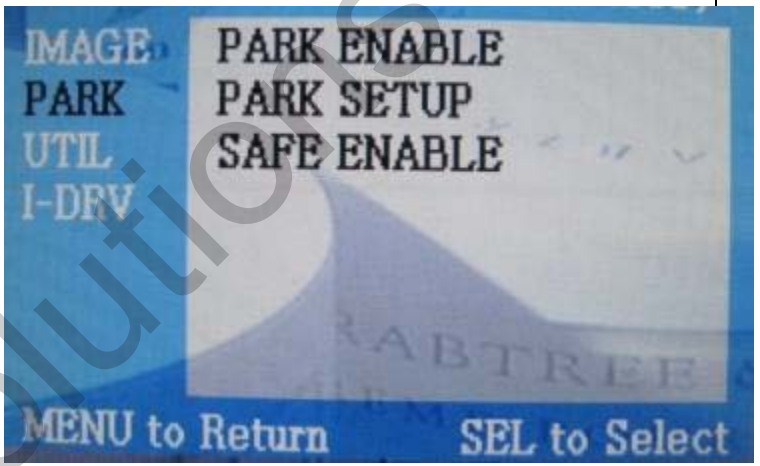
Car Solutions

OSD(On Screen Display)

· Factory Mode

–Operated by pressing ▲ → ▼ → ▲ →MENU of remote or keypad in order.





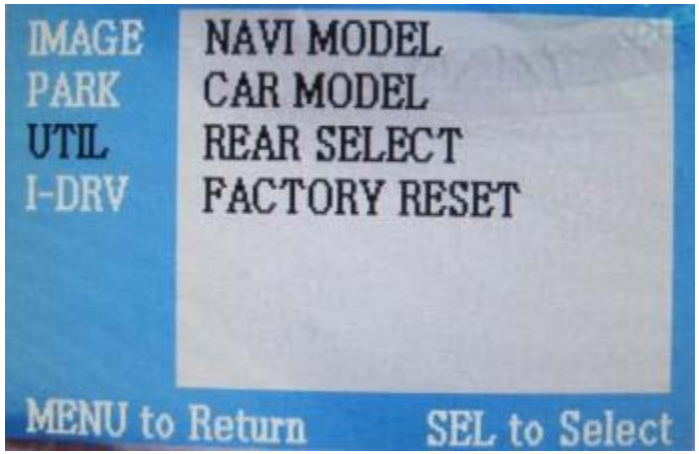
* Factory Mode

- **IMAGE** **H-POSITION** : Move to left and right
  V-POSITION : Move to up and down
  H-SIZE(NAVI): Navigation horizontality adjustment
- **PARK** **PARK ENABLE** : Setting of using parking guide line. (Refer to the next page)
  PARK SETUP : H-POSITION : Move to left and right of the lines
  V-POSITION : Move to up and down of the lines
  SAFE ENABLE : When connecting 'SAFE' wire from power cable to side break.
  ENABLE – Only OEM Info Image displaying in Drive gear position.
  DISABLE – No AV source locking in Driving

Car Solutions

OSD(On Screen Display)

· Factory Mode



*Factory Mode

- **UTIL** NAVI MODEL : DEFAULT : 480 x 234 (For wide use navigation)
  My VI : 800 x 480 (Korea Navigation)
  MD7000 : 800 x 480 (Korea Navigation)
  KD-900 : 800 x 480 (China Navigation)
  CAR MODEL : E90 (2009Y 3, 5 series), F01(2009Y 7 series), F10 (2010Y 5 series and GT)
  REAR SELECT : LAMP : Detecting rear gear by rear lamp signal with wiring.
  CAN : Detecting rear gear by CAN signal

  FACTORY RESET

Car Solutions

OSD(On Screen Display)

· Factory Mode

* Factory Mode

I-DRV I-DRIVE TYPE : I-DRV type select (Old or New I-DRV)

DMB TYPE : N.C

I_DRV CONTROL : DVD, CMMB 제어 OSD메뉴 ON/OFF 설정 (중국향)

Car Solutions

-Factory Mode : Parking line Setting

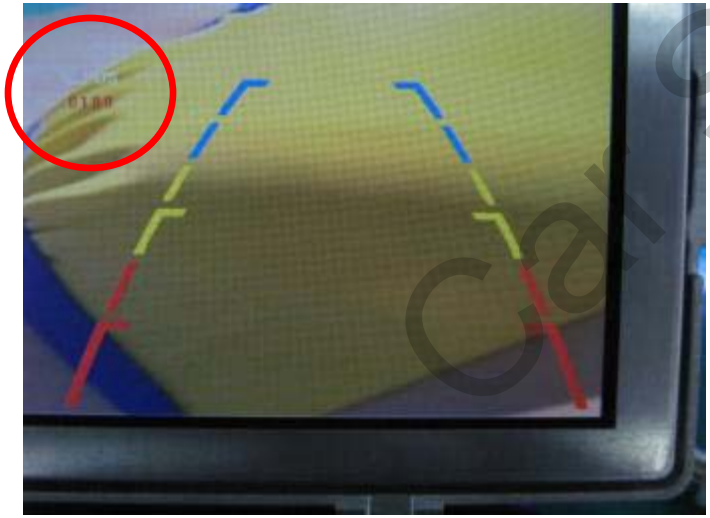
Factory Default : PARK ENABLE – OFF

(1) Set "PARK ENABLE" to "ON" to display the lines in the factory menu. (Default – OFF)
- TYPE : Guide line type select (only one type is available in current version)

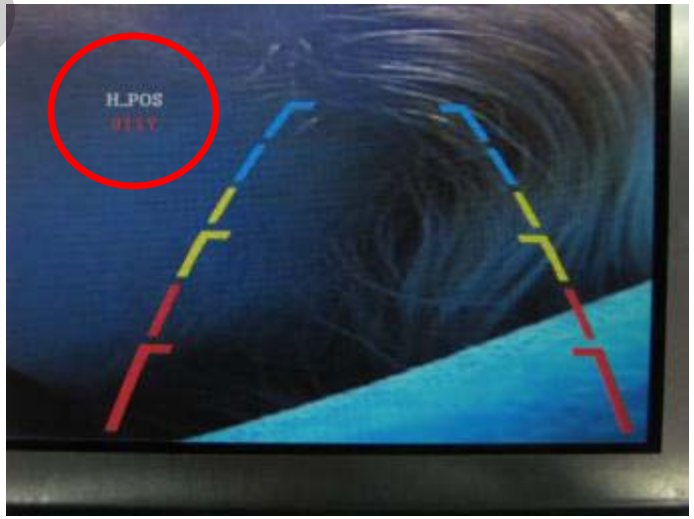
(2) After setting and put the gear to rear position, the parking line appears. If needed, press "OK" button of remote to move the line position horizontally on the screen.

(3) After adjusting H-POS, you can press "OK" button again to get vertical move of the lines.

[Vertical Move]



[Horizontal Move]

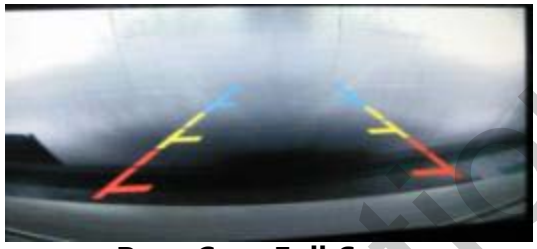


Car Solutions

How to use Parking guide line (E90)

-Rear mode display setting : Set display type with button on steering wheel. It has 5 types as below.

<PDC Full Screen>



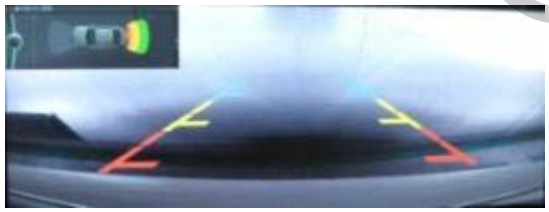
<Rear Cam Full Screen>

<Rear Cam + Mini PDC Screen>

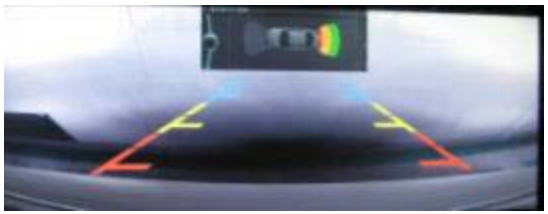
<PDC : Rear Cam>

<Rear Cam : PDC>

-Mini PDC Image positioning : Set mini PDC image position with button It has 3 types as below



<Type 1>



<Type 2>

<Type 3>

Car Solutions

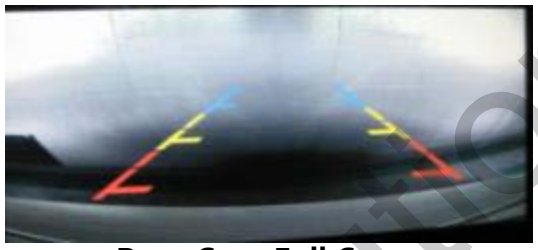
www.car-solutions.com

How to use Parking guide line (F01, F10)

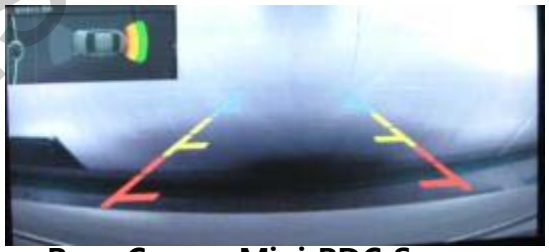
※ This function is only available in car with aftermarket rear cam

-Rear mode display setting : Push button on I-DRV to set the type of rear mode display. It has 5 types as below.

<PDC Full Screen>



<Rear Cam Full Screen>

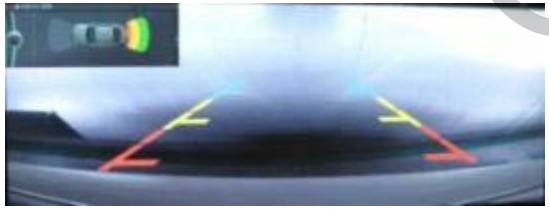


<Rear Cam + Mini PDC Screen>

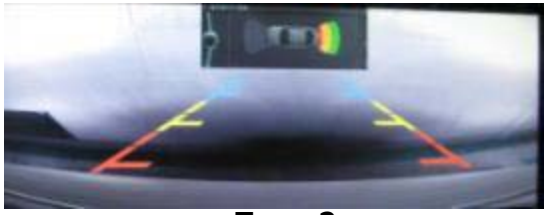
<PDC : Rear Cam>

<Rear Cam : PDC>

-Mini PDC Image positioning : Push button on I-DRV to move Mini PDC image on the screen. It has 3 types as below



<Type 1>



<Type 2>

<Type 3>

Car Solutions

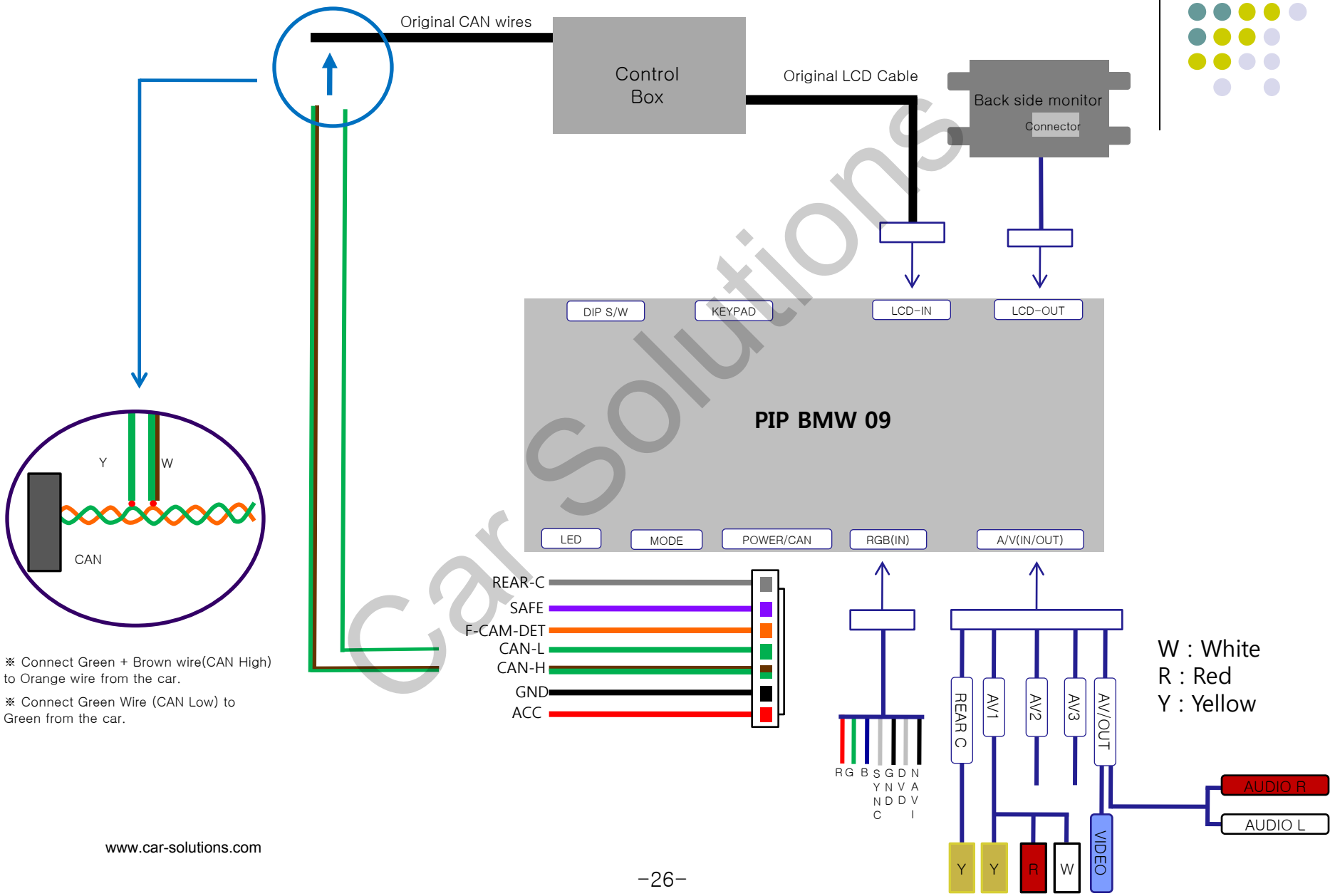
-Product Composition

Car Solutions

OSD Keypad or Remote : 1 EA (Optional)
LCD Cable : 1 EA
Navi Cable : 1 EA
Toggle Switch : 1 EA (Optional)

Power Cable : 1 EA
A/V Cable : 1 EA
Ground or IR Cable : 1 EA

-Installation Diagram



※ Connect Green + Brown wire(CAN High) to Orange wire from the car.

※ Connect Green Wire (CAN Low) to Green from the car.

Car Solutions

-Installation Manual

1. Monitor separation

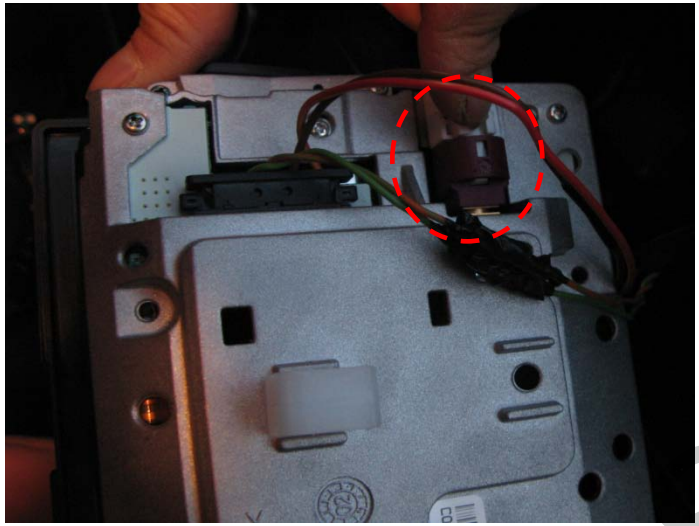
- Remove indicated screws with a proper tool to take apart monitor from the vehicle.

- Pull the monitor out from up to down and take apart it.

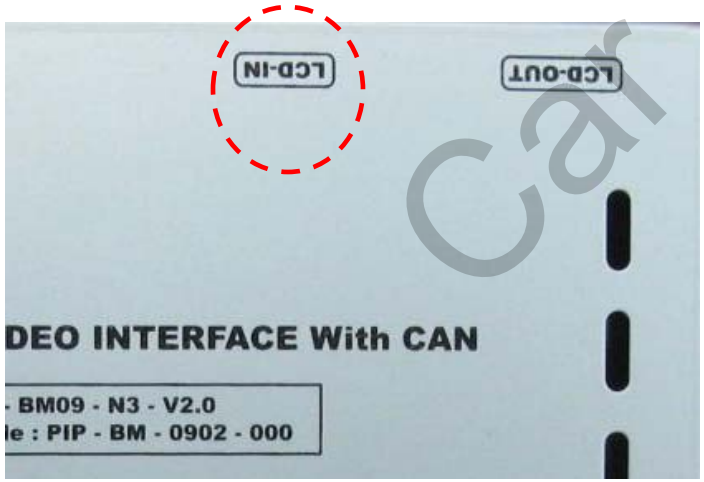
Car-solutions

-Installation Manual

2. Connecting Monitor with Interface



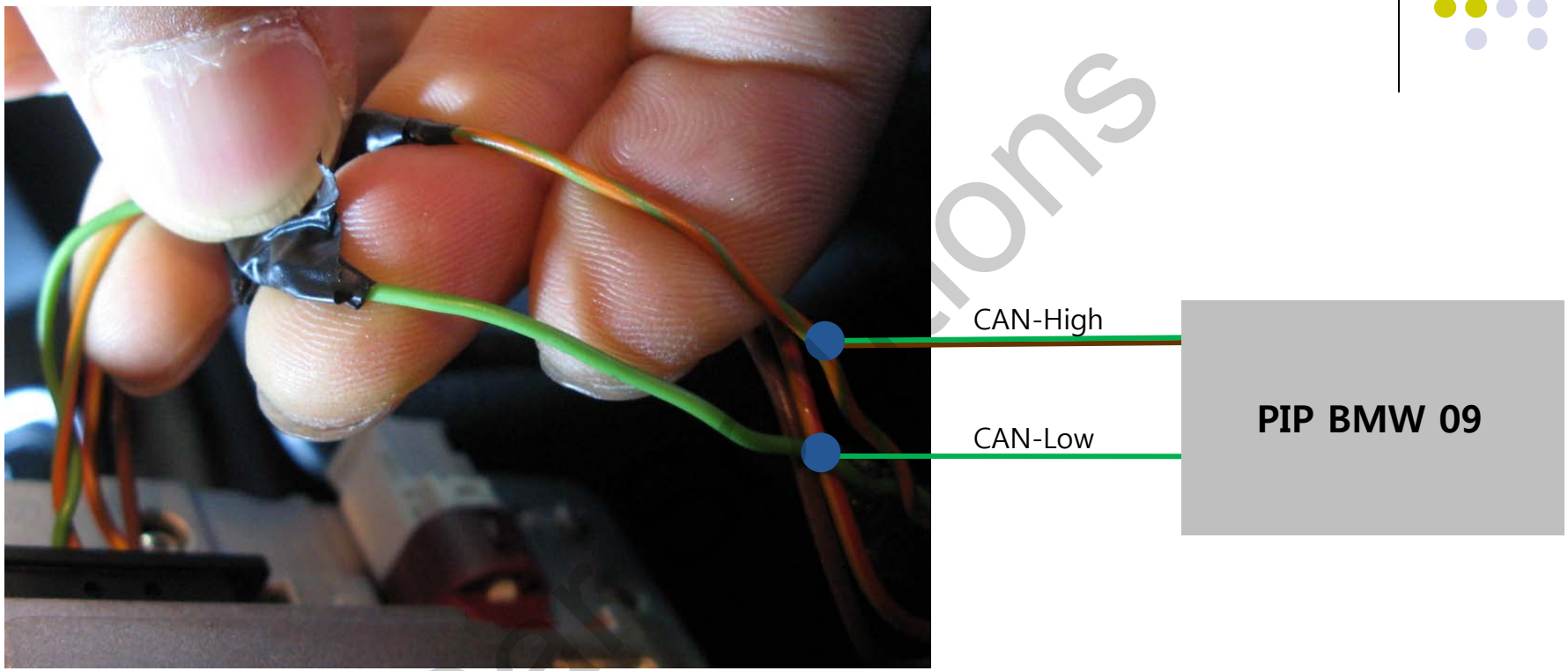
- As left picture, after unplugging the original LCD cable, plug the supplied LCD cable to the indicated connector in the monitor.



-Connect the unplugged original LCD cable to the interface.
Make sure all connections are made correctly the right way as described.

Car Solutions

-Installation Manual



As the above picture, the offered CAN High wire (Green+Brown) to OEM CAN high (Green+Orange) wire from car, the offered CAN Low wire (Green) to OEM CAN Low (Green)

-Installation Q & A

①

Q. All I got on the screen is black.

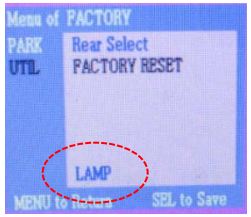
A. Check second LED lamp of the interface is on, if not, check A/V sources connected are working well. (Second lamp indicates AV sources connected works well.) Check interface connection has been done well.

②

Q. Screen only displays white like left picture.

A. Check LCD out cable is connected well, if this status keeps, inform to manufacturer.

③



Q. Rear CAM does not appear, when car is in reverse after CAN wiring.

A. Operate "FACTORY MODE" like left picture, then select "UTIL → Rear Select" If it is set as "LAMP", change it to "CAN" by remote or keypad.

※ LAMP : In case of connecting "Rear-C" wire of Power Cable to Rear Lamp in vehicle.

CAN : In case of detecting Rear Cam thru CAN signal. (CAN must be wired)

④

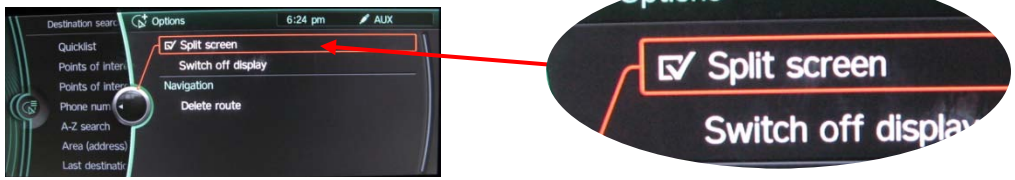
Q. After moving gear to "P" or "D" from "Reverse", I can't get navigation, but half PDC Image in the screen.

- Once, you starts driving, the screen displays navigation right away, this is not an system error.

⑤

Q. After setting PIP function, I got only half OEM image at the right in the screen.

- This is not an error, just caused by user's setting mistake, user should set to "Split Screen" in the OEM menu.



Car Solutions

-Installation Q & A

⑥ Q. I can not switch A/V sources
A. Check IR or Ground cable connection.
Check LED lamps in the interface, if it is not on, check power cable.

⑦ Q. Displayed image color is not proper (too dim or not suitable color)
A. Try to select “INITIAL” in OSD menu, if it does not work, inform to manufacturer.)

⑧ Q. Unwanted A/V mode is displayed. (A/V source switching order : OEM->RGB->AV1->AV2->AV3)
A. Check DIP Switch Setting.

⑨ Q. OEM image is not displayed.
A. Check interface’s LCD In/Out cable connection. If the status keeps on, inform to manufacturer.

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